REMARKS

Favorable reconsideration is respectfully requested in view of the foregoing amendments and following remarks.

Claims 9 and 18 had been amended to specify that the pore size of the nonwoven fabric, is 42 μm or less. See Table 5 at the present specification. The claims have also been amended to specified that the support member or nonwoven fabric is used in contact with the semipermeable membrane.

Turning to the Official Action, claims 9-11 and 17-18 have been rejected under 35 U.S.C. 103 as being unpatentable Shinjou et al., the '559 patent. This ground of rejection is respectfully traversed as applied to the claims after the foregoing amendments.

The amendment is based on Table 5 in the present specification. Table 5 shows that the support member of the present invention has many fine pores (small maximum pore diameter) and show high surface smoothness, while having air permeability as high as the conventional air permeability (on line 7, page 48 to line 3, page 49). The support member of the present invention can ensure wide effective filtering area. For the high pressure filtration semipermeable membrane, the existence of just one big pore in the support member must be avoided. Otherwise, the effective filtering area decreases. The support member of the present invention has no big pore to lower the effective filtering area.

The prior art Shinjou et al. (USP 4,795,559) corresponds to Japanese Patent Publication No. 35009/1993) referred to on line 21, page 4 to line 8, page 5. The support member of Shinjou et al. is formed from a nonwoven fabric having double-layer structure which comprises a low-density dry web layer having an air permeability of 5-50 $cc/cm^2 \cdot s$ and a high-density wet web layer having an air permeability of from 0.1 $cc/cm^2 \cdot s$ to 5 $cc/cm^2 \cdot s$. However, as the support member of Shinjou is used in contact with the membrane on the surface side of the low-density dry web layer, it is difficult to prepare the membrane having a smooth surface and to ensure wide effective filtering area by means of said support member for the semipermeable membrane.

The Examiner says that Shinjou et al describes the claimed strength and elongation. The strength and elongation in Shinjou et al means breaking strength and breaking elongation

respectively. On the other hand, the claimed elements of the present invention is a mean value of a breaking length at elongation of 5 % in a lengthwise direction (MD) and a crosswise direction (CD), which are completely different from breaking strength and breaking elongation. The breaking length at elongation of 5 % is physical properties used to show nerve of nonwoven fabric, and relates to size stability.

The Examiner refers to the claimed heat shrinkage. However, the claimed element of the present invention is heat shrinkage stress (g/d), which property is completely different from heat shrinkage (%). The heat shrinkage (%) is a ratio of the length before and after heating. Low stress does not matter. However, when the heat shrinkage stress is low, a nonwoven fabric web can not shrink by heat because fibers are tied down in fiber aggregation, so that formation of fine and uniform pores can not be expected.

Although the Examiner does not refer to the Δn property, Shinjou et al. is silent about double refraction (Δn).

When nonwoven fabric is prepared by using polyester fibers having the double refraction (Δn) of 0.170 or more, the heat shrinkage stress(200°C) of 0. 10-0.60 g/d, and the mean single fiber fineness of 1.0-8.0 denier, the nonwoven fabric for the support member for the semipermeable membrane having the mean breaking length (at elongation of 5 %) of 4.0 km or more and the air permeability of 0.2-10.0 cc/ cm^2•s can be obtained. (see line 4 to line 21 in page 16).

The support member for the semipermeable membrane thus obtained has higher elasticity modulus and superior dimensional stability in comparison with the conventional support member for the semipermeable membrane. Furthermore, the support member for the semipermeable membrane according to the present invention has more micropores and superior surface smoothness in comparison with the conventional support member for the semipermeable membrane even under the condition that the air permeabilities of the both support members of the present invention and the conventional one are adjusted to the same value. Therefore, the support member for the semipermeable membrane according to the present invention has various excellent physical properties, such as those described below:

(i) peeling and breaking of the semipermeable membrane do not occur because of excellent adhesion of the support member to the semipermeable membrane formed on said support member;

(ii) dimensional change of the support member do not occur when the support member is employed in high-pressure filtration;

(iii) the semipermeable membrane is supported by the support member even if a filtering rate is high;

(iv) even and smooth semipermeable membrane having no irregularity can be formed on the support member; and

(v) the semipermeable membrane having no pinhole can be formed on the support member as a strike-through of the film-forming solution do not occur. (see line 18, page 25 to line 23, page 26 of the present specification).

In summary, the cited reference fail to suggest the claimed invention. There is no teaching or suggestion in the reference to motivate one skilled in the art to prepare the claimed subject matter with the recited characteristics.

In view of the foregoing, it is believed that all grounds of rejection set forth in the Action have been overcome, and that the application is now in condition for allowance. Accordingly, such allowance is solicited.

Respectfully submitted,

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